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Study on the temperament as a predictor of peer interactions at preschool ages

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Abstract

Preschool-aged children's peer interactions are influenced by several factors including social competence, prosocial actions of peers and their own, environmental settings, and temperamental characteristics. At early ages, social competence manifest during the play with peers significantly. The numerous studies on preschool children defend the idea that the ability to establish relations with one's peers represents an essential competence and a self-regulation indicator for the future developmental stages. The present study proposes to demonstrate the association between children's temperament and peer interactive play behaviors. The correlation analysis points out that certain aspects of children's temperament associates with behaviors similarly during play.

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1. Introduction

The specialty literature reveals that, even since early childhood, the children interactions have important effects not only on the social, cognitive, communication and academic development level but also on the emotional self-regulation. At preschool-ages, children interactions refer to the behavioural process established verbally or physically with their friends or peers (Ladd, 2005). Preschool-aged children's peer interactions are influenced by several factors including social competence, prosocial actions of peers and their own, environmental settings, and temperamental characteristics. Likewise, the relations among peers are influenced by their emotional competence

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(the capacity to acknowledge emotions, the empathy development level), but also by the quality of play –the dominant activity during childhood.

2. Theoretical Background

2.1. Social competence

Social competence is the condition of possessing the social, emotional, and intellectual skills and behaviours needed to succeed as a member of society (Owens & Johnston-Rodriguez, 2010). Developing social competence and emotional health during early childhood influences not only social adaptation but also the academic success (Denham, 2006; La Paro & Pianta, 2000, Birch, Ladd & Blecher-Sass, 1997).

Social competence interfaces with emotional competence, since the management of one's own emotions and others' emotions is particularly important in the initiation and maintenance of social relations.

A child's social competence depends upon a number of factors including the child's social skills, social awareness and self-confidence (Owens & Johnston-Rodriguez, 2010), positive interactions with teachers, positive representations of self, nonrejected peer status, (Denham, 2006), achieving social goals, establishing and maintaining friendships and getting accepted by peers (Yoleri, 2014).

Preschool children whose competences are insufficiently developed incur difficulties in forming and maintaining social relations: they are marginalized, rejected by their schoolmates, which contributes to the limitation of interactions with peers. The studies show that children with poorly developed social abilities have difficulties in solving the tasks given by the educator and cannot focus during activities, which determines academic difficulties, delinquency, behavioural disorders or drug abuse on long term. (Denham, 2006; Kochenderfer & Ladd, 1996; Gagnon, Craig, Tremblay et al., 1995).

New studies demonstrate that the development of social competences is very important since early childhood in order to avoid the advance of emotional and behaviour disorders during maturity (Ladd, 2000).

At early ages, social competence manifests during the play with peers significantly. The numerous studies on preschool children defend the idea that the ability to establish relations with one's peers represents an essential competence and a self-regulation indicator for the future developmental stages. A desire to understand individual differences associated with peer play behaviours and overall social competence has led many researchers to explore child characteristics, such as temperament, that predict these behaviours.

2.2. Temperament in preschool years

Temperament confers the predisposition to a certain modality to react emotionally and behaviourally. Through one's life, temperament can be slightly modified, the environment influences being mostly compensatory and can facilitate the development of the child's adaptive capacity.

The specialty studies show that temperament represents a determining factor of social competence. The influence of this factor can be identified at the level of prosocial and antisocial behavioural outcomes.

Analyzing the temperament, children fall in three temperamental typologies:

a. *Children with easy temperament*: are socially adapted, capable of developing relations with their peers, obey the rules, explore the environment in case of new situations and are able to manage emotional reactions adequately.

b. *Children with a difficult temperament*: do not obey rules, have difficulties in following instructions, involve in actions characterized as aggressive and manifest crises of anger when they do not get what they want; are perceived as aggressive, impulsive and have problems in managing their fury or frustration when they are forced to wait.

c. *Children with slow- to- warm up temperament* are generally reserved, they avoid relations with others, express their wishes and emotions rarely, need encouragement from the adults to imply in new activities; they are often considered shy, inclined to social isolation, showing fear in new, unfamiliar situations or excessive sadness. (Campos, Barrett, Lamb, Goldsmith & Stenberg, 1983; Zentner & Bates, 2008).

Rothbart & Putman (2006) underline three factors of temperament in their studies : *surgency* (impulsivity, high intensity pleasure, and activity level); *effortful control* (attention, inhibition and perceptual awareness) and *negative affectivity* (internalizing and externalizing behaviours).

During childhood, different aspects of temperament influence social competence and implicitly the activity during play: sociability, inhibition, effortful-control, activity level, and negative emotionality (Mendez et al., 2002).

Temperament influences social and behavioural interactions and emotional regulation in early childhood.

2.3. Peer interactions and peer play

Interpersonal relations established among children reflect the development of social competence (Denham, 2007). Through the initiated interactions, children develop cooperative, mutual help, asking for help behaviours and conflict management through strategies appropriate to their age, also the forming of friendship relations (Eisenberg, Fabes & Spinard, 2006; Denham, 2007). Peer play represents an important predictor of social competence. Peer play represents the context in which children have the opportunity to understand social concepts and to acquire social behaviours such as collaboration, mutual help, assertiveness, conflict management skills and emotional regulation. The tendency of current research is to characterize social competence in terms of peer social interactions (Srofe & al., 2005). Longitudinal studies demonstrate that the fact that there is a direct relation between the tendency to interact during play and later social outcomes.

Peer play experiences are associated with development outcomes: cognitive, physical, social and emotional. Through play the child not only discovers the surrounding world but also understands and changes it in order to correspond with his own understanding and experience, trying friendship, mutual help, the solving of social issues.

During play we can identify the following behavioural types at children: *Play interaction* is an indication of children's play strengths and includes such behaviours as comforting and helping other children, showing creativity in play, and encouraging others to join play; *Play disruption* describes aggressive, antisocial behaviours that interfere with on-going peer play interactions and *Play disconnection* reflects withdrawn behaviour and nonparticipation in peer play.

Coolahan et.al. (2000) demonstrate the relation between the child's constructive peer play and the development level of social competence, of the motivation and commitment during school years.

3. Study aims and hypotheses

The central purpose of this study was to investigate the relationship between preschool children's temperament and peer interactive play behaviors:

- To identify the relations between temperament traits and peer interactive play behaviors;
- To identify the effect of temperament over peer interactive play behaviors.

The general hypothesis of the study is: temperament traits are predictors of peer interactive play behaviours.

4. Method

4.1. Participants

The research has been performed on a fixed, non-aleatory sample, the group of subjects being formed of 45 children, having the average age of $m = 6,10$, $SD = 0,52$, 28 boys and 17 girls, which come from school units in the Argeş district, from the urban – 34 children, and the rural – 11 children environment.

4.2. Measures

Children's Behaviour Questionnaire – CBQ (Putman & Rothbart, 2006) had been applied to parents in the short variant. The CBQ is a 195 item questionnaire with 15 scales to measure temperament of children aged 3 to 8 years. Parents are asked from *1 – extreme untrue of your children* to *7 – extreme true of your children*. Scales scores are created by averaging applicable item scores. Alphas for the Surgency is .75, Negative Affects is .72 and Effortful control is .74.

Peer interactive play behaviours is an instrument adapted after Penn **Interactive Peer Play Scale – PIPPS** (Fantuzzo et al., 2005). The scales of the instrument used here are play interaction, play disruption and play disconnection. The instrument has a number of 32 items and is filled in by the educator and evaluates on a Likert scale in 4 steps: 1- *never* to 4 – *always*. Internal consistency among these data factor was found to be acceptable: play interaction is .75, play disruption is .72 and play disconnection is .76.

5. Results and discussions

The analysis of the data resulted from the study had been carried out by means of SPSS programme. Behind checking the correctness of data and with a view to test the hypothesis of the study, we used the Pearson correlation test. The data had been centralized in Table 1.

Table 1. Correlation matrix among the variables: temperament traits, peer interactive play behaviors

Variables	1	2	3	4	5	6
1. Surgency/extraversion	-	-.32*	.18*	.00	-.04	-.16
2. Negative Affects		-	.02	.00	.02	-.03
3. Effortful control			-	.18*	-.00	-.00
4. Play interaction				-	-.15*	-.25*
5. Play disruption					-	.24*
6. Play disconnection						-

* $p < .05$, ** $p < .01$, $N = 45$

The analysis of the results points out the fact that significant correlations had been determined at the level of temperament factors and at the level of play behavior, though rather reduced in intensity: surgency/extraversion associates negatively with the dimension negative affects ($r = -.032$, $p < .05$) and positively with effortful control ($r = 0.18$, $p < .05$), while the dimension negative affects does not correlate with the dimension effortful control.

The analysis of children's play behaviour underlines the fact that behaviours from the area play interaction associate negatively with those from the area play disruption ($r = -.015$, $p < .05$) and play disconnection ($r = -.025$, $p < .05$), while the behaviours from the area play disruption, respectively play disconnection associate positively ($r = 0.24$, $p < .05$).

The results of the study emphasize the idea that significant relations appear between temperament factors and specific behaviors during children's play. Among these, effortful control enters a significant association though low in intensity with interactive behaviours during play ($r = -.018$, $p < .05$). It seems that the factor effortful control represents a determinant of interactions and interpersonal competences during play (Mathieson & Banerjee, 2010). No significant relations had been identified between surgency/extraversion, respectively negative affects and specific behaviours play disruption and play disconnection.

The temperament is accepted as an important factor in social competence since early ages. The temperament plays a primary role in acquiring prosocial behaviours. It is obvious that children's peer play does not represent the sole context of manifesting social competences but since it embodies a dominant activity during childhood, can be considered a proper analysis criterion in studies. The specialty literature underlines the fact that children with a high level of social competence are accepted by their peers (Bandon et al., 2010), and during school years they develop commitment behaviours in educational tasks.

Being accepted by one's peers in their play also falls into the manifestation of social behaviours. Children with interactivity competences reveal positive temperament manifestations. The opposite relation is also valid: children who manifest aggressively in the relations with their peers are rejected by these ones and behaviours during play are disadaptive.

6. Conclusions

The specialty studies demonstrated that the positive interaction among peers represent an indicator of social competence development. Determining the influence of temperament over behavior during play presents not only

theoretical but also operative – practical implications. The identification of children's temperamental type since early ages proves to be beneficial for preventing later behavioural problems; the identification of disadaptive behaviours in the peer play represents a powerful predictor for isolation and anxiety problems, for the disadaptive modalities to solve less familiar issues of adult life as well as for mental health problems, antisocial behaviours and poor academic achievement.

The identification of children with high risk of disadaptive behaviours implies the development of specific educational programmes and of support groups; these have to offer adequate contexts and instruments to help children develop efficient strategies of answering different challenges according to their needs.

The present study represents a pilot research for identifying the predictors of children's behavior during play. Future researches will also take into consideration other variables which belong to children's individual characteristics: age, the level of neuro-cognitive development (mainly, language and intellect), or interpersonal variables: parenting styles, teachers' styles and educational climate.

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